CPM - Microcontroller

Adam Davis

SMBus

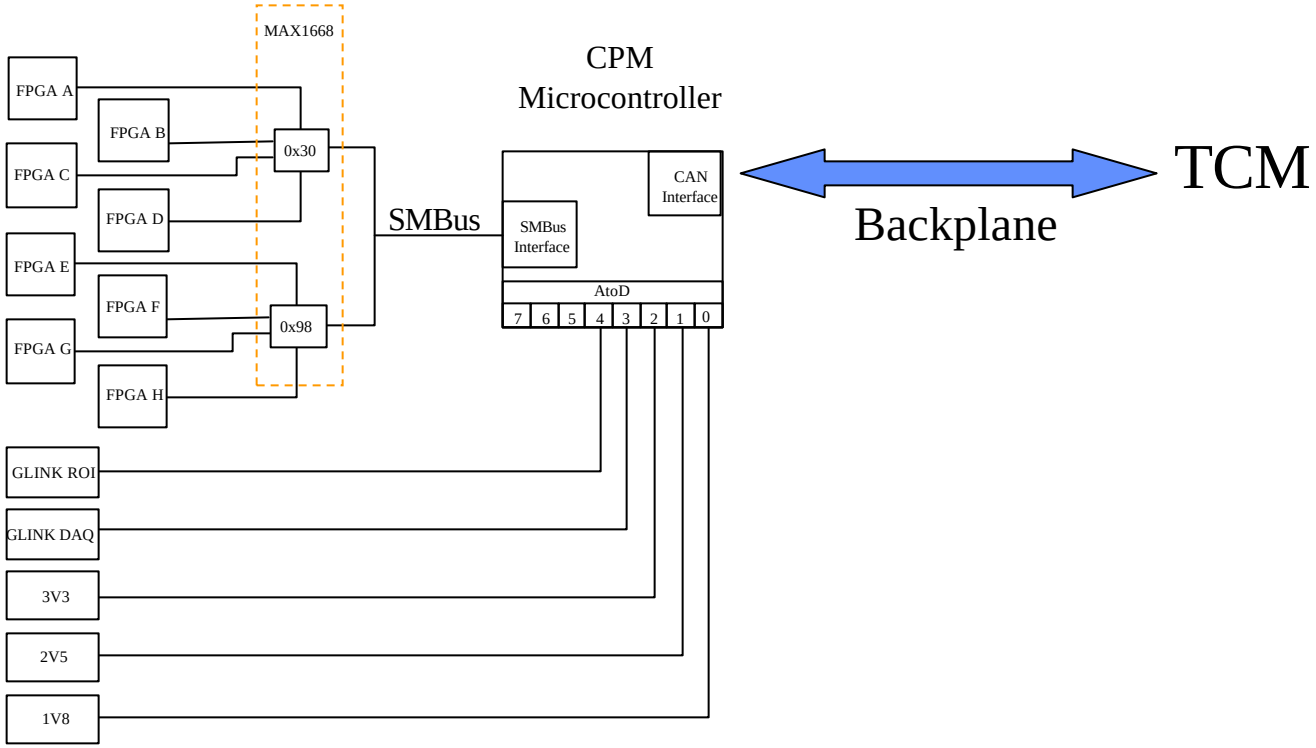
A2D Converters

CAN

Version II considerations

CPM - Microcontroller

CPM Temperature & Voltage monitoring layout



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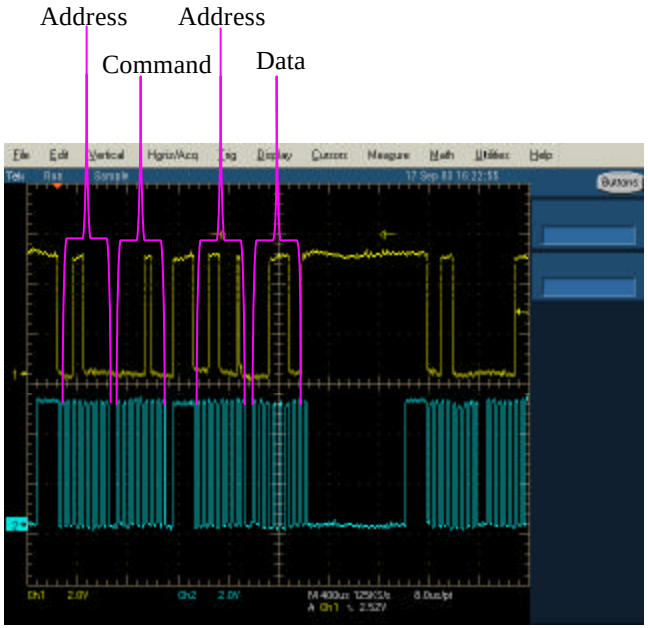
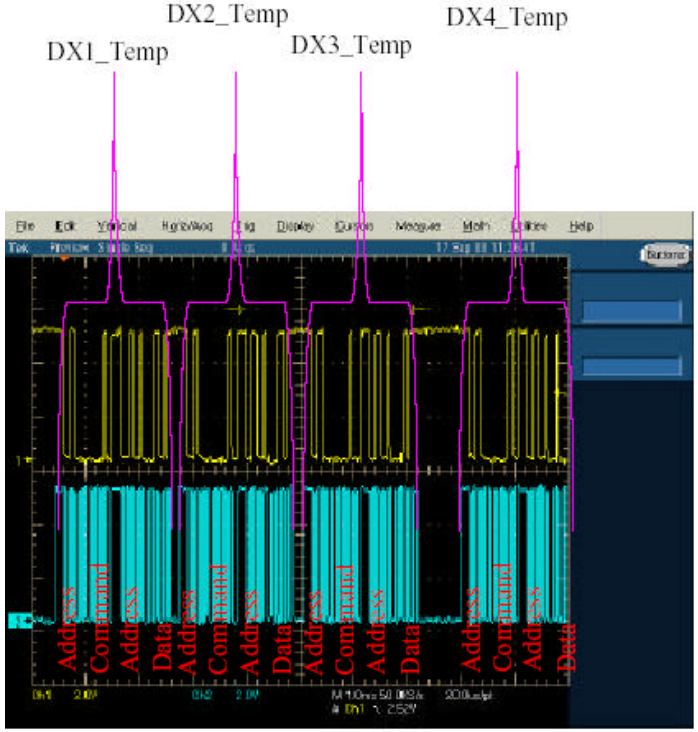
- **Established communication to both SMBus MAX1668 devices. One address 0x30 and other 0x98.**



One SMBus Read



Multi SMBus Read - all Temperatures

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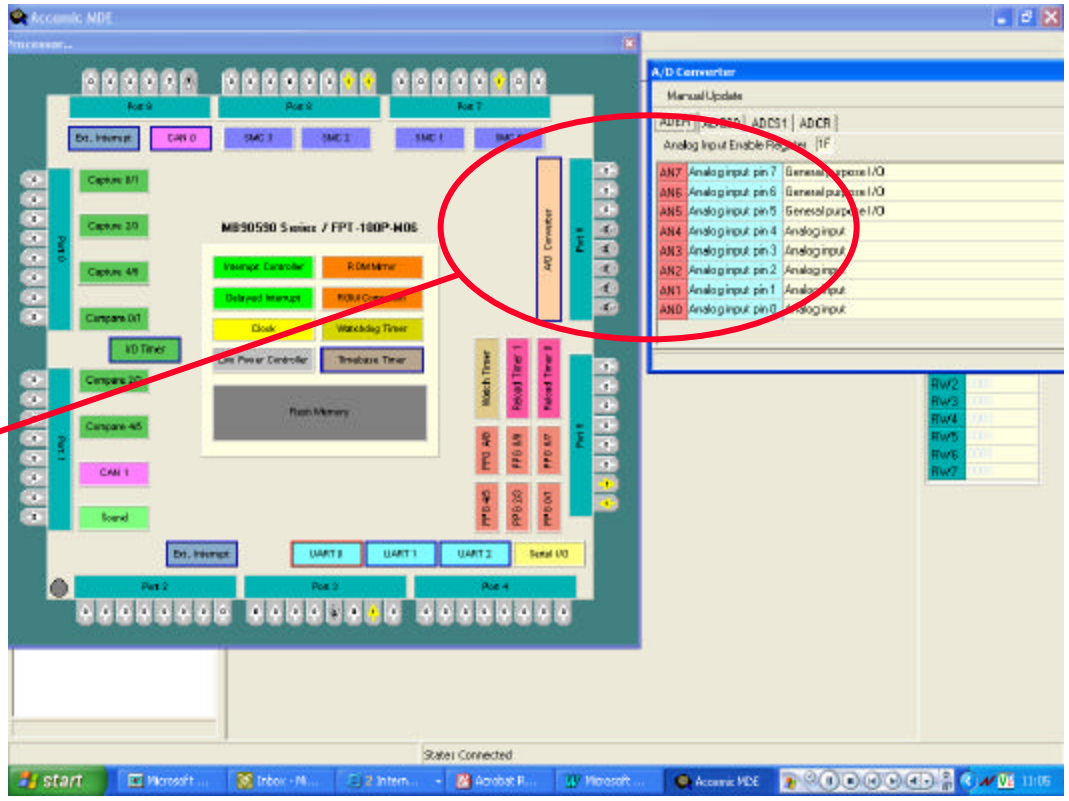
- **Have read the five A2D converters used to monitor the 1V8, 2V5 , 3V3, GLINK ROI and GLINK DAQ temperatures.**

Accemic software (Screen dump)

A2D port with configuration data



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- **Over-temperature alarm working. This function alerts Timing Control Module when an FPGA gets too hot.**
- **Works in crate slots CPM 3, 4, 9 and 11. Need to try others.**
- **Works in crate with 2 CMM's and 1 CPM.**
- **Can address CMM and CPM individually while in the same crate.**
- **All good news! Or is it?**

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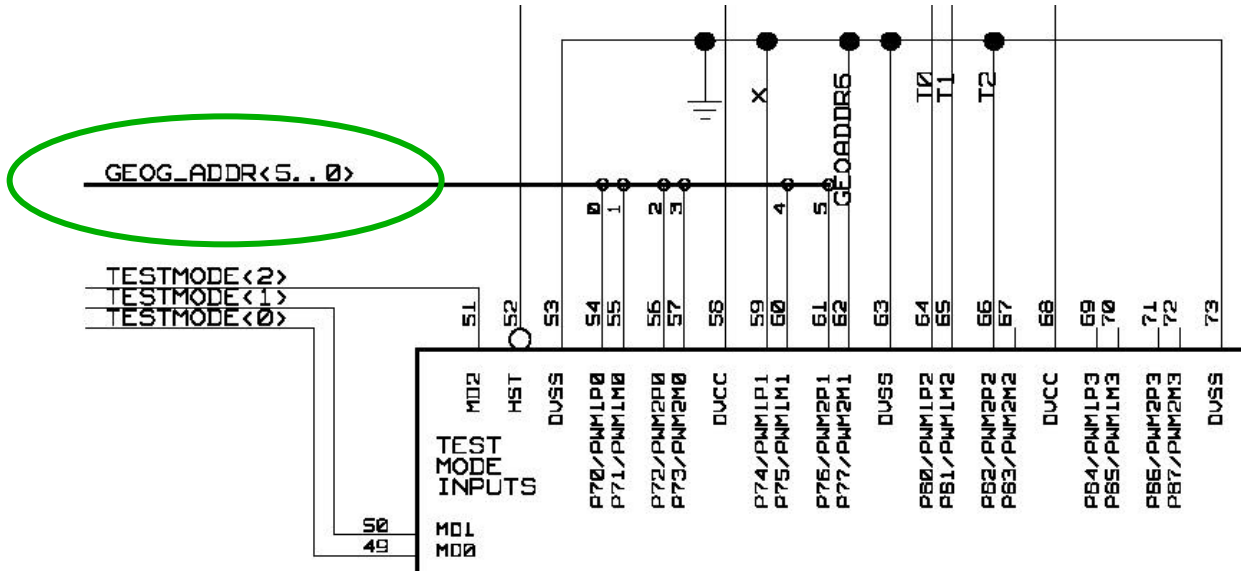
- **What I can't do.**
  - **Cannot read GEO_ADDR(5..0) - Buffer these to 5V CMOS**



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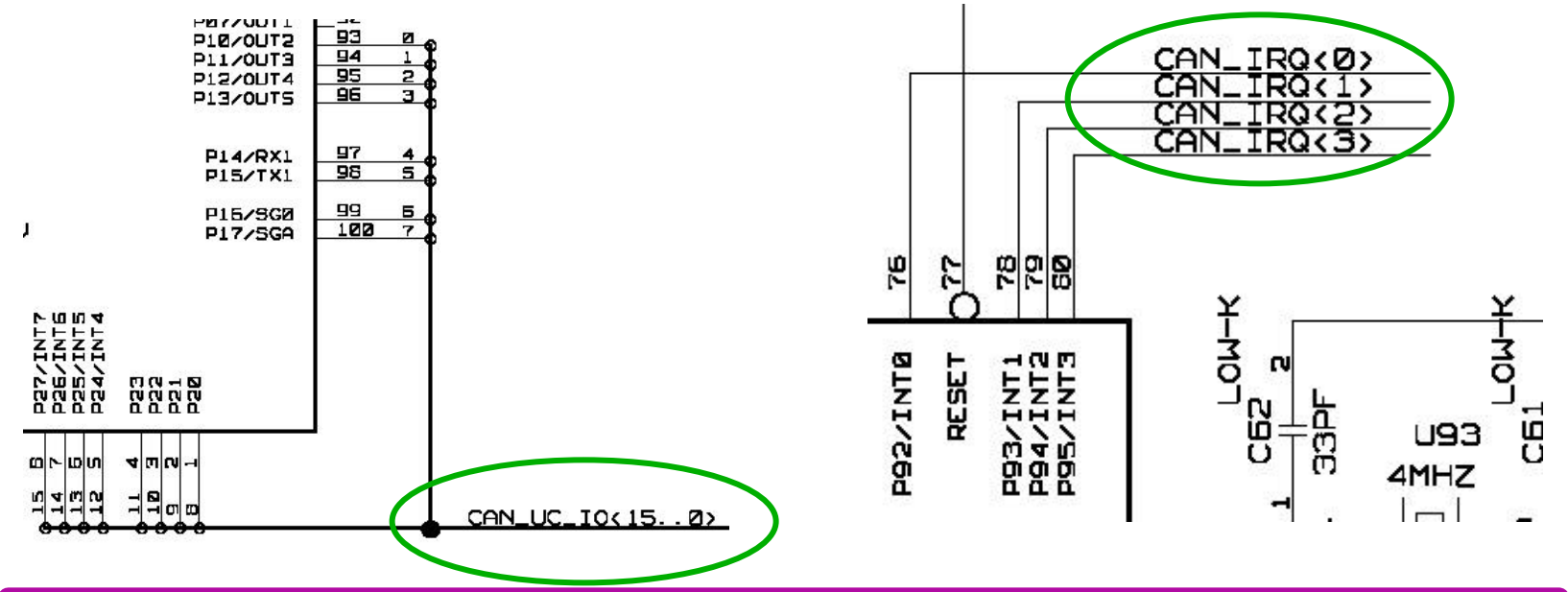
- **Think this will also include the nets: -**
  - **CAN_UC_IO(15..0)**
  - **CAN_IRQ(3..0)**



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- **Would like the ALERT of the MAX1668 devices to go to separate IRQ pins. This will allow me to write Exception routines rather then poling ALERT pins in the main software.**

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- **Version II - Considerations**
  - **All inputs to the microcontroller need to be 5V CMOS. Could use 74FCT244 buffer as on CMM.**
  - **Need to check address connections correspond with Murrough's TTCBusy Document**

Move the nets CAN_UC_IO(15..14) to a different place and connect the alert pins of MAX1668 devices to these interrupt pins.